# EVALUATION OF HEARING IN A BRAZILIAN FARMING COMMUNITY EXPOSED TO PESTICIDES

**Maria Isabel Kós,** *Universidade Federal do Rio de Janeiro, Brazil*
**Armando Meyer,** *Universidade Federal do Rio de Janeiro, Brazil*
**Martha Marcela Bazílio ,** *Universidade Federal do Rio de Janeiro, Brazil*
**Maria de Fátima Miranda,** *Universidade Federal do Rio de Janeiro, Brazil*

**Introduction:** Several studies have shown that chemicals can cause damage to humans and the environment. Although the main focus of studies on hearing health is exposure to noise, studies on the impacts of chemical exposures on hearing ability are becoming more frequent, especially for workers.
**Objectives**: This study aimed to evaluate the peripheral auditory system, through pure tone audiometry in farmers living in areas of intensive use of pesticides in the State of Rio de Janeiro/Brazil.
**Methods:** 70 persons of both sexes, residents in a small city, aged between 25 and 59 years, 35 farmers and 35 non-farmers were evaluated. All individuals had their peripheral hearing evaluated by means of audiometry in frequencies of 0.25, 0.5, 1, 2, 3, 4, 6 and 8 kHz. Individuals with external and/or middle ear problem were excluded from the search. All individuals were interviened regarding their health issues, socioeconomic status, education and exposure to pesticides. Hearing loss was considered for thresholds higher or equal to 25dB at any frequency tested.
**Results**: The frequency of hearing loss was 3.67 times (95% CI: 2.08 to 6.48) among farmers (94.3%) compared to non-farmers (25.7%). Moreover, most of the hearing losses were more observed on high frequencies.
**Conclusion:** This study suggests that agricultural activity and possible exposure to pesticides increases the risk of hearing loss.